

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A driving circuit ~~for driving which drives~~ a semiconductor device ~~which is driven~~ based on a control signal supplied to a gate terminal ~~and includes a main electrode for providing an output and a sense electrode~~, said driving circuit comprising:

an overcurrent protection circuit ~~for detecting occurrence or non-occurrence of~~ configured to detect an overcurrent condition of said semiconductor device based on a sense voltage obtained from ~~[[said]]~~ a sense electrode, and outputting an overcurrent protection signal ~~which instructs to said gate terminal to instruct~~ said semiconductor device to stop operating when an overcurrent condition is detected; ~~[[and]]~~

an overcurrent protection signal masking part ~~for establishing a masking period including at least a predetermined~~ configured to output a masking signal period immediately after a turn on and a turn off of said semiconductor device and invalidating said overcurrent protection signal in said during a masking period after a turn on and a turn off of said semiconductor device, [[while]] and validating said overcurrent protection signal ~~[[in]]~~ during periods other ~~periods~~ than said masking period ~~to supply said overcurrent protection signal to said gate terminal of said semiconductor device; and~~

a control element configured to receive said masking signal and said overcurrent protection signal and configured to output said control signal.

Claim 2 (Original): The driving circuit according to claim 1, further comprising a short-circuit protection circuit for detecting occurrence or non-occurrence of a short-circuit condition of said semiconductor device based on said sense voltage, and supplying a

short-circuit protection signal which instructs said semiconductor device to stop operating when a short-circuit condition is detected, to said gate terminal of said semiconductor device.

Claim 3 (Original): The driving circuit according to claim 2, wherein
said overcurrent protection circuit detects that said semiconductor device is under an overcurrent condition when said sense voltage is higher than a first detection threshold voltage,
said short-circuit protection circuit detects that said semiconductor device is under a short-circuit condition when said sense voltage is higher than a second detection threshold voltage, and
said second detection threshold voltage is determined to be higher than said first detection threshold voltage.

Claim 4 (Original): The driving circuit according to claim 1, wherein
said overcurrent protection signal masking part receives a drive-related signal which is synchronized with a signal controlling said semiconductor device so as to be turned on or off, to establish said masking period in response to said drive-related signal.

Claim 5 (Original): The driving circuit according to claim 1,
wherein said semiconductor device includes an IGBT.

Claim 6 (New): A driving circuit which drives a semiconductor device based on a control signal supplied to a gate terminal, said driving circuit comprising:
an overcurrent protection circuit configured to detect an overcurrent condition of said semiconductor device based on a sense voltage obtained from a sense electrode, and

outputting an overcurrent protection signal to said gate terminal to instruct said semiconductor device to stop operating when an overcurrent condition is detected;

means for outputting a masking signal invalidating said overcurrent protection signal during a masking period after a turn on and a turn off of said semiconductor device, and validating said overcurrent protection signal during periods other than said masking period; and

means for receiving said masking signal and said overcurrent protection signal and for outputting said control signal.

Claim 7 (New): A driving circuit which drives a semiconductor device based on a control signal supplied to a gate terminal, said driving circuit comprising:

an overcurrent protection circuit configured to detect an overcurrent condition of said semiconductor device based on a sense voltage obtained from a sense electrode, and outputting an overcurrent protection signal to said gate terminal to instruct said semiconductor device to stop operating when an overcurrent condition is detected;

an overcurrent protection signal masking part configured to output a masking signal invalidating said overcurrent protection signal during a masking period after a turn on and a turn off of said semiconductor device, and validating said overcurrent protection signal during periods other than said masking period; and

means for receiving said masking signal and said overcurrent protection signal and for outputting said control signal.

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 4. This sheet, which includes Fig. 4, replaces the original sheet including Fig. 4.

Attachment: Replacement Sheet